Docket No. BVARR.001

CLAIMS:

What is claimed is:

1.   A method of customizing an element management
5   system, comprising:
        generating a customized model representing a network
element from a base model;
        generating a data channel for the customized model;
        providing a protocol adapter for the customized
10 model; and
        plugging the customized model into a software bus by
way of the protocol adapter and the data channel.

2.   The method of claim 1, wherein the base model is a
15 generic representation of a type of network device, and
wherein the customized model is a specific representation
of a vendor specific instance of the network device.

3.   The method of claim 1, wherein the base model is a
20 model information base.

4.   The method of claim 1, wherein generating a data
channel includes modifying a base data channel based on
functionality of the customized model.

25

5.   The method of claim 1, wherein generating a
customized model representing a network element from a
base model includes compiling an information model into
an XML/NMI instance file.

Docket No. BVARR.001

6.   The method of claim 5, wherein generating a data channel further includes incorporating the data channel into the XML/NMI instance file.

5   7.   The method of claim 5, wherein providing a protocol adapter includes:

determining a protocol used by the network element; and

incorporating a protocol adapter that performs

10   conversion of messages from the protocol used by the network element to a protocol used by an element management system framework.

8.   The method of claim 1, further comprising:

15   defining a presentation screen; and

linking the presentation screen with a network service, wherein the presentation screen is used to view information obtained from the network element.

20   9.   The method of claim 1, wherein the base model and customized model make use of the Universal Modeling Language.

10.   The method of claim 1, further comprising

25   customizing business logic associated with the customized model.

11.   The method of claim 10, wherein customizing the business logic includes:

Docket No. BVARR.001

defining the business logic in the Action Language; and

compiling the Action Language into executable code.

5   12. An apparatus for customizing an element management system, comprising:

means for generating a customized model representing a network element from a base model;

means for generating a data channel for the

10   customized model;

means for providing a protocol adapter for the customized model; and

means for plugging the customized model into a software bus by way of the protocol adapter and the data

15   channel.

13. The apparatus of claim 12, wherein the base model is a generic representation of a type of network device, and wherein the customized model is a specific representation

20   of a vendor specific instance of the network device.

14. The apparatus of claim 12, wherein the base model is a model information base.

25   15. The apparatus of claim 12, wherein the means for generating a data channel includes means for modifying a base data channel based on functionality of the customized model.

Docket No. BVARR.001

16.   The apparatus of claim 12, wherein the means for generating a customized model representing a network element from a base model includes means for compiling an information model into an XML/NMI instance file.

5

17.   The apparatus of claim 16, wherein the means for generating a data channel further includes means for incorporating the data channel into the XML/NMI instance file.

10

18.   The apparatus of claim 16, wherein the means for providing a protocol adapter includes:

       means for determining a protocol used by the network element; and

15   means for incorporating a protocol adapter that performs conversion of messages from the protocol used by the network element to a protocol used by an element management system framework.

20   19.   The apparatus of claim 12, further comprising:
          means for defining a presentation screen; and
          means for linking the presentation screen with a network service, wherein the presentation screen is used to view information obtained from the network element.

25

20.   The apparatus of claim 12, wherein the base model and customized model make use of the Universal Modeling Language.

Docket No. BVARR.001

21. The apparatus of claim 12, further comprising means for customizing business logic associated with the customized model.

5   22. The apparatus of claim 21, wherein the means for customizing the business logic includes:

means for defining the business logic in the Action Language; and

means for compiling the Action Language into
10   executable code.

23. A computer program product in a computer readable medium for customizing an element management system, comprising:

15   first instructions for generating a customized model representing a network element from a base model;

second instructions for generating a data channel for the customized model;

third instructions for providing a protocol adapter
20   for the customized model; and

fourth instructions for plugging the customized model into a software bus by way of the protocol adapter and the data channel.

25   24. The computer program product of claim 23, wherein the base model is a generic representation of a type of network device, and wherein the customized model is a specific representation of a vendor specific instance of the network device.

Docket No. BVARR.001

25.   The computer program product of claim 23, wherein the base model is a model information base.

26.   The computer program product of claim 23, wherein
5   the second instructions for generating a data channel include instructions for modifying a base data channel based on functionality of the customized model.

27.   The computer program product of claim 23, wherein
10   the first instructions for generating a customized model representing a network element from a base model include instructions for compiling an information model into an XML/NMI instance file.

15   28.   The computer program product of claim 27, wherein the second instructions for generating a data channel further include instructions for incorporating the data channel into the XML/NMI instance file.

20   29.   The computer program product of claim 27, wherein the third instructions for providing a protocol adapter includes:
         instructions for determining a protocol used by the network element; and
25   instructions for incorporating a protocol adapter that performs conversion of messages from the protocol used by the network element to a protocol used by an element management system framework.

Docket No. BVARR.001

30. The computer program product of claim 23, further
comprising:

     fifth instructions for defining a presentation
screen; and

5   sixth instructions for linking the presentation
screen with a network service, wherein the presentation
screen is used to view information obtained from the
network element.

10   31. The computer program product of claim 23, wherein
the base model and customized model make use of the
Universal Modeling Language.

    32. The computer program product of claim 23, further
15   comprising fifth instructions for customizing business
logic associated with the customized model.

    33. The computer program product of claim 32, wherein
the fifth instructions for customizing the business logic
20   includes:

     instructions for defining the business logic in the
Action Language; and

     instructions for compiling the Action Language into
executable code.

25

    34. The method of claim 8, wherein defining a
presentation screen includes:

     generating a XML/UIL file defining the presentation
screen; and

Docket No. BVARR.001

rendering the presentation screen by processing the XML/UIL file.

35. The method of claim 34, wherein rendering the
5 presentation screen by processing the XML/UIL file includes:

instantiating one or more Java beans based on instructions obtained from the XML/UIL file.

10 36. The method of claim 35, wherein the one or more Java beans include application program logic for capturing and acting upon user events associated with one or more elements of the presentation screen, the one or more elements of the presentation screen being associated with
15 the one or more Java beans.

37. The apparatus of claim 19, wherein the means for defining a presentation screen includes:

means for generating a XML/UIL file defining the
20 presentation screen; and

means for rendering the presentation screen by processing the XML/UIL file.

38. The apparatus of claim 37, wherein the means for
25 rendering the presentation screen by processing the XML/UIL file includes:

means for instantiating one or more Java beans based on instructions obtained from the XML/UIL file.

Docket No. BVARR.001

39. The apparatus of claim 38, wherein the one or more
Java beans include application program logic for
capturing and acting upon user events associated with one
or more elements of the presentation screen, the one or
5   more elements of the presentation screen being associated
with the one or more Java beans.

40. The computer program product of claim 30, wherein
the fifth instructions for defining a presentation screen
10   include:
        instructions for generating a XML/UIL file defining
the presentation screen; and
        instructions for rendering the presentation screen
by processing the XML/UIL file.
15

41. The computer program product of claim 40, wherein
the instructions for rendering the presentation screen by
processing the XML/UIL file include:
        instructions for instantiating one or more Java
20   beans based on instructions obtained from the XML/UIL
file.

42. The computer program product of claim 41, wherein
the one or more Java beans include application program
25   logic for capturing and acting upon user events
associated with one or more elements of the presentation
screen, the one or more elements of the presentation
screen being associated with the one or more Java beans.